REMARKS

Claims 1-10 and 12-20 are in this application and are presented for consideration. By this amendment, Applicant has amended claim 1 to include the features of claim 11. Accordingly, claim 11 has been canceled. It is Applicant's position that the amendment to claim 1 does not raise any new issues as the combination of claim 1 and claim 11 has already been considered.

Claims 1-20 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (U.S. 3,998,373) in view of Benn et al. (U.S. 4,575,932).

Applicant wishes to thank the Examiner for speaking with Applicant's representative on October 16, 2008. During the discussion with the Examiner, Applicant's representative argued that Jones et al. fails to change one of the friction length, friction duration, arc time and forge force. Applicant's representative further noted that Figure 3 of Jones et al. does not show a varying profile of at least one of the parameters as featured in claim 11. The Examiner stated that he would further consider Applicant's representative's arguments as well as the teachings of the prior art once a response has been submitted.

Jones et al. discloses a length compensation for special friction welding machines, namely, inertia-controlled friction welding machines with flywheel. The shaft with one component is accelerated in these by means of a motor, and the rpm increases. As soon as a certain triggering rpm has been reached, the motor is switched off and the feed is switched on for generating the upsetting pressure, and the workpieces to be welded together are brought into contact with one another, and the rotary motion is braked during a mutual frictional

engagement and stopped.

The Office Action takes the position that Figure 3 of Jones et al. discloses a varying profile of a processing parameter (speed in RPM) against space (upset in mm). Applicant respectfully disagrees with this interpretation of Jones et al. Jones et al. must be given a fair reading for what it teaches and suggests. Jones et al. fails to teach and fails to suggest the combination of changing a set value of a process parameter wherein the process parameter is at least one of friction length, friction duration, arc time and forge force. Jones et al. merely discloses a direct relationship between speed and upset. At most, Figure 3 of Jones et al. shows a relationship between speed and upset wherein the profile of the relationship of the speed and upset is constant and not varied as claimed. Figure 3 of Jones et al. clearly shows that if speed is increased or decreased, the upsetting path correspondingly increased or decreased. Compared with Jones et al., the present invention takes a different approach. The set value of at least the friction length, friction duration, arc time and forge force of the present invention is changed such that a parameter profile of the at least one of the friction length, friction duration, arc time and forge force varies. This allows regulation of the friction created between the workpieces as well as regulation of the pushing force exerted on the two workpieces. This advantageously provides for a precise control of the workpieces so that precise tolerances are achieved. Jones et al. fails to provide such accurate control advantages since Figure 3 of Jones et al. is completely void of any suggestion or teaching of varying a parameter profile of at least one of friction length, friction duration, arc time and forge force. In fact, Jones et al. fails to direct the person of ordinary skill in the art toward changing a set value of at least one of the

friction length, friction duration, arc time and forge force as claimed. As such, the prior art as a whole fails to establish a prima facie case of obviousness as Jones et al. does not disclose important features of the claimed combination.

Benn et al. fails to provide any teaching or suggestion for the combination of changing a set value of a process parameter wherein the process parameter is at least one of friction length, friction duration, arc time and forge force wherein a parameter profile of the at least one parameter is varied. Benn et al. merely discloses a process that predetermines ideal rates of relative rotation and metal upset for a given material to be welded. The predetermined rates are entered in a microprocessor memory and then connects the microprocessor to the apparatus on which the weld is to be effected. According to Benn et al., the microprocessor monitors the actual rates, compares them with the ideal rates and generates signals from those differences with which to adjust operation of the apparatus. However, Benn et al. is completely void of any teaching or suggestion that would direct the person of ordinary skill in the art toward changing a set value of at least one process parameter including a friction length, friction duration, arc time and forge force wherein a parameter profile of the at least one process parameter varies with respect to time and/or space. In fact, Benn et al. is completely void of any mention of changing a set value of one or more of a friction length, friction duration, arc time and forge force as claimed. As such, the prior art as a whole takes a different approach and fails to teach or suggest each feature of the claimed combination. Accordingly, Applicant respectfully requests that the Examiner reconsider the rejection and favorably consider claims 1, 13 and 16 as now presented and all claims that respectively depend thereon.

Favorable consideration on the merits is requested.

Respectfully submitted
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JJM:BMD
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Attached: Petition for One Month Extension of Time

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SHOULD ANY OTHER FEE BE REQUIRED, THE PATENT AND TRADEMARK OFFICE IS HEREBY REQUESTED TO CHARGE SUCH FEE TO OUR DEPOSIT ACCOUNT 13-0410.